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WEEKLY STATION REPORTS

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REPORT FOR THE MONTH OF FEBRUARY, 1939.

HAVRE:

Weather during February was somewhat variable, the first ten days being characterized by subzero temperatures, with a minimum of -40°, on the morning of the 10th. More nearly normal conditions prevailed thereafter, with relatively mild temperatures during the last two weeks. The mean temperature of 10° was 7° below normal. Snowfall exceeded the monthly average, but with very little accumulation at any time, owing to chinook winds after nearly every appreciable fall. Winter grains had more protection than in January, and there is no evidence of injury at present. Wind movement, mostly chinook in character, was above average, high winds occurring on the 11th, 17th, 18th, and 24th.

Experimental feeding of cattle continued. The mature cow herd received some hay during the entire month, but grazing was possible on many days.

Maximum temperature, 47°; minimum, -40°; precipitation, 0.40 inch; snowfall, 9.0 inches.

JUDITH BASIN:

The extreme five-day cold spell which began on the 7th recorded the lowest minimum of the winter with a -40° on the 9th. The mean for the month was 9° below the 30-year average and February was the third coldest on record.

Many snow flurries during February failed by 0.03 inch to bring precipitation to the monthly average. For 1939 we are about 0.40 inch below station normal. Fields of stubble at present have about a 6-inch snow cover, but fallow is well exposed; and it has proved to be a hard winter for fall sown grains, because of the lack of snow cover and numerous winds of high velocity.

Maximum temperature, 45°; minimum, -40°; precipitation, 0.53 inch.

HUNTLEY:

The coldest weather, so far, this winter occurred early in the month. Minimum temperatures were below zero on the first 11 days of the period, the coldest being -31° on February 10. Snow fell on 13 days, but the amount was usually small and melted within 24 hours. The total precipitation was 0.29 inch, or 61 percent of the average for the month. Fields were covered to a depth of 3 to 4 inches during most of the cold weather, affording considerable protection to fall grains. At the close of the month the ground is covered to a depth of 1½ inches of light snow received during the last 24 hours.

Maximum temperature, 50°; minimum, -31°; precipitation, 0.29 inch.

SHERIDAN:

Except for one short period of continuous below zero weather, the month was fairly mild, although temperatures were below the station average most of the time. The average mean for the month was about 9° below the station average.

Precipitation was slightly over twice the station average, but with only a light covering at the beginning of the month, thawing was sufficient to prevent any great accumulation of snow, the maximum depth at any one time being about 5 inches at the end of the month, with the most of the snow in drifts and any land exposed to blowing and not covered with stubble or grass bare. There was a light covering of snow over most cultivated land during the most severe weather, however. Wind movement was just about average.

No field work was possible during the month.

Maximum temperature, 41°; minimum, -30°; precipitation, 0.88 inch.

DICKINSON:

February was a cold month with only two nights when the minimum was above zero. The mean temperature of 0° was 13° below normal and 20° below the mean for January. This mean was also 6° below that of February 1938 but well above that of February 1936, which set the record of -12° for the month. The minimum of -38° was recorded on the morning of the 8th.

Snowfall was measured at 9.8 inches. The depth on the ground varied from an average of 6-8 inches until the close of the month when it had melted down to about 4 inches, with a few bare areas. Fields generally held a good snow cover in the tall stubble and weeds.

Plenty of feed is available, and livestock are generally in good condition.

Maximum temperature, 40°; minimum, -38°; precipitation, 0.58 inch.

MANDAN:

Fruit production on the northern Plains varies greatly from year to year. 1938 was a good year, with yields considerably above the average of the drought years. Apples and crabs, plums and plum hybrids, gooseberries, Bessey cherries, service berries, and golden currants all bore heavy crops. The yields of the first two groups were approximately three times those of 1937, but grapes, chokecherries, Prunus tomentosa, currants, raspberries, dewberries, and sour cherries bore light to medium crops. Strawberries under dry-land conditions have not given satisfactory results, and have not been under test for several years.

Apple varieties which produced fruit of fair to good quality were Anoka, S.D. 5958, Longfield, Erickson, and Anisette. Crab apples bore very heavily, and for the fourth consecutive year S.D. 7 was the highest yielder. The fruit of this variety is small, hard, and yellow, but the tree is very vigorous and a heavy annual bearer. Florence, Amur, White Arctic, Columbia, and Dolgo were the better quality crabs which bore fruit.

Native varieties of plums were generally the highest yielders, followed closely by the Japanese hybrids. Some of the better quality native varieties which bore well were Wolf (freestone), Wyant, Several numbered selections, Wastesa, and Terry. Japanese hybrid varieties which yielded well were Takota, Toka, Emerald, Minn. 161, Minn. 62, Waneta, and Red Wing. Minn. 133 and Tecumseh again looked very promising as early maturing plums of large size and good quality. Bessey cherry hybrids of merit were Eyami, Opata, Sapa, Compass, and Cikana.

Gooseberries bore heavily and the fruit was of good quality, there being no hot dry winds to defoliate the plants and scald the fruit. Carrie, Pixwell, and Houghton were outstanding varieties.

Native fruits such as Bessey cherries, service berries, golden currants, chokecherries, and their respective varieties and selections, bore medium to heavy crops.

Alpha, Beta, and Suelter grapes made vigorous growth and bore fair crops.

Prunus tomentosa, or the Nanking cherry, has been an erratic bearer but produced a fair crop this year.

The currant planting was re-established in 1937, and the bushes made vigorous growth but bore little fruit. London Market, Red Lake, and White Grape appear to be the better varieties.

The raspberry planting was also re-established in 1937, and many replacements were made in 1938 resulting in light crops of fruit. Cumberland, a black raspberry, has survived the conditions which eliminated the other raspberries but has born little fruit. Sodus, a new purple variety developed at the New York Experiment Station, was set out in 1938 and has made remarkable growth. It produced some fruit of large size and good quality and looks promising.

Leucretia dewberry, like the Cumberland black raspberry, has survived the drought conditions but did not bear fruit until 1937 and bore only a light crop in 1938.

Sour cherries have in some cases survived, but yields are not appreciable.

Hardy seedling stocks for budding were in excellent condition this fall, and large numbers of the better standard varieties of fruits were budded. Plum and apple seed planted for future seedling stocks germinated well, and the seedlings made excellent growth.

Grasshoppers were the most troublesome insect pest during the year, but no serious damage resulted.

Fruit varieties in the cultural tests were generally fruitful this year. Yields varied with varieties from light to very heavy. All trees in the hardiness test were pulled in the fall, and the ground was plowed before winter. The trees in the test were not of uniform age, due to replacements, and the results were therefore not conclusive.

Office work has consisted of the annual report, revising of Farmers' Bulletin 1522, and the assembly of data for a technical publication.

Potted trees for breeding work were moved from the storage cellar into the greenhouse February 17, about two weeks later than usual. However, the breeding work should be completed before spring work starts.

The month of February opened with a severe storm and cold. Temperatures dropped sharply, and the minimum remained below zero for 15 days with a range of -6° to -34°. There were 8 other days during the month with a range of -2° to 26°.

The month opened with a blizzard and roads were blocked in many places. Again on the 9th and 10th the roads were blocked in some places from the snowfall of the 5th and lighter ones following.

Maximum temperature, 45°; minimum, -34°; precipitation, 0.62 inch; snowfall, 9.00 inches.

BELLE FOURCHE: (Report for the month of January, 1939.)

The weather was consistently mild, and the mean temperature for the month was 28°. This is 11° above the 31-year average mean for January, and it is only 1° less than the highest of record for the month. Precipitation occurred on 12 days, but there was only one instance in which more than 0.06 inch was recorded. Approximately 2.5 inches of snow, measuring 0.24 inch precipitation, were received on January 31. A strong wind during the night of January 31 turned the storm into a blizzard which continued throughout the following day, the total precipitation for the storm being 0.40 inch. Very little snow was retained on cultivated fields, and all highways were blocked.

Wind movement during the month was slightly above normal. There were 4 days in which the average velocity exceeded 10 miles per hour, and high winds on January 21 and 23 caused extensive soil blowing on smooth fields. Fallow, green manure, and corn stubble plots were duckfooted early in the month, and soil blowing on the rotations was confined to a few winter wheat and fallow plots in the path of wind blown soil from adjacent fields.

Winter grain seeded in small grain stubble, standing corn stalks, and on fallow is beginning to germinate; but the surface soil on corn stubble, sorgo stubble, and fall plowed ground is still too dry for germination to take place.

Maximum temperature, 57°; minimum, 0°; precipitation, 0.41 inch.

ARCHER:

The temperatures during February did not drop to excessive lows, but the month was colder than normal. Precipitation was less than average. Wind velocities were rather high during the first half of the month but less than normal during the last half. During the greater part of the last half of the month the ground was covered with a fleece of snow.

Winter cereals have remained dormant, but they are in a strong condition. Reports indicate that the winter cereals in this region give more promise than they have for a number of years.

Livestock generally are in good condition. Stored and range feeds are plentiful, and only normal animal shrinkage has taken place.

A. V. Nordquist of Lincoln, Nebr., and George Knutson of Cheyenne, Wyo., visited the station February 27.

Maximum temperature, 54°; minimum, -12°; precipitation, 0.26 inch.

NORTH PLATTE:

The weather condition for the month may be characterized as cold and dry. Temperatures were below normal. Below zero readings were recorded on 6 days, and on 11 days the maximum readings were below freezing. Little snow fell during the month. The precipitation for February is 0.38 inches below normal, and the accumulated departure since January 1 is - 0.07 inch. There is approximately a foot of frost in the ground, and it is not probable that much field work can be done before the third week of March.

The condition of the winter wheat has not improved over last month. The leaves are mostly brown, but there appears to still be considerable life near the surface of the ground. It will be rather difficult to make much of a forecast on the wheat in this locality until later in March. The prospects for a good crop of wheat in the western sections of the State are the best in several years, but unless spring conditions are very favorable there will be a light crop over the rest of the State.

Maximum temperature, 60°; minimum, -13°; precipitation, 0.15 inch.

AKRON:

The coldest weather of the winter was experienced during this month. Wind movement was at a minimum, and the atmosphere remained clear. Much soil, even on the station, is subject to being started by the first hard driving wind. It is hoped this will be proceeded by warm weather that will soften the frozen surface. Precipitation in 7 separate light snow storms did not reach the established average of 0.41 inch.

State Extension Service drew an estimated crowd of 800 here on the 17th at the Hog Feeders' Day. Apparently there is great interest in mixed livestock farming, which can only mean greater stability.

Maximum temperature, 62°; minimum, -13°; precipitation, 0.31 inch.

COLBY:

February was cold with frequent snows, but was fairly open and pleasant most of the time. Precipitation was recorded on 9 days, all light snows, except on the 26th and 27th when 4 inches fell on each day. On the 27th the snow drifted badly. Some of the bare fields caught only a small portion of the snow that fell.

There were no extremely high winds during the month. It was fairly windy and dusty with some soil blowing on the 1st, 7th, and 17th. Not a lot of damage was done, however.

The temperature was below zero on only three mornings. The highest minimum temperature during the month was 21°, the lowest -9°.

The winter wheat froze down during the frequent cold spells. It is still devoid of brace roots and appears to be barely holding on. The fields present a brown appearance, but some of the leaves are still faintly green at the base. The surface soil is very loose.

Maximum temperature, 64°; minimum, -9°; precipitation, 0.87 inch; snow, 12.1 inches. Precipitation, 52-year average, 0.59 inch; precipitation for January and February 1939, 1.21 inches.

HAYS:

The month of February was comparatively quiet, only a few days having been windy and slightly dusty. The windy periods were of brief duration except for February 18, when a very heavy wind laden with dust continued throughout the night. The wind laid early in the forenoon of the 19th, but the air remained dusty most of the day. The wind during the night was the heaviest that has occurred this winter and was a gentle reminder of the dust storms of a few years ago.

February all but added another to the list of dry months. The drought was at least temporarily broken February 27 when a 7-inch snow occurred. The snow drifted badly and in many places little was left on the fields, but despite that fact it brought some moisture into the vicinity and adds some to the humidity as well as adding some moisture to the soil where the drifts lay.

The temperatures ranged between 63° and -11°. The mean temperature was 28.7°. The precipitation consisted of five snows totaling 10.5 inches. Only the last one was of value to the fields. The smaller snows practically all blew off the fields.

GARDEN CITY: (Report for the month of January, 1939.)

Temperatures in general were rather mild. Five dust storms occurred, two of which were termed "bad". There was some local soil movement, but considerable of it came from distant areas. Precipitation was in the form of rain. This was of some benefit to the wheat, which is, in general, in need of moisture.

Field work consisted of listing the alleys between plots and cultivating plots which were in danger of soil blowing.

Maximum temperature, 69°; minimum, 11°; precipitation, 0.51 inch.

GARDEN CITY:

The precipitation this month was above average as it was in January. The total thus far this year is 1.31 inch, and the average is 0.95 inch. Most of the precipitation in February came on the 26th and 27th in the form of snow.

Temperatures were about 8° below average for both the maximum and minimum. The average wind velocity was 1.4 miles per hour above the 21-year average. There were 9 days in which there was dust in the air. On one of these days the storm was termed "bad" and on another "very bad". The total number of dust storms for January and February this year is 14 as compared with 22 for the same period last year.

The wheat on the station appears to be in fair condition, and the prospects for a crop are better than they have been for several years.

Lamb Feeder's Day was held February 25, at which time results of the feeding experiments were discussed. More than 200 persons attended.

Station visitors were F. D. Farrell, President of Kansas State College; L. E. Call, Director of Kansas Experiment Stations; R. F. Cox and C. W. McCampbell of the Animal Husbandry Department, Kansas State College; L. C. Aicher, Superintendent of Fort Hays Experiment Station; and E. H. Teagarden, District Agent in Extension Service.

Maximum temperature, 56°; minimum, -7°; precipitation, 0.80 inch.

DALHART:

There were only 8 days with appreciable soil movement during the month, and on only one day was soil movement severe for a prolonged period. One day of high wind and soil movement from the north gave a grave reminder of the April 1938 storm. On the 27th the wind was at the same high velocity, but on that day it was snowing so there was a blizzard rather than a dust storm. Probably less than 2 inches of snow accompanied the storm, although we have a drift of considerable size some 5 feet in height immediately in front of the office.

Winter wheat and winter rye continue to show good prospects and have started spring growth within the past 10 days. Rabbits have flocked to the station at night during this period. The vineyard is especially green with the rye cover crop, and at night this seems to be the rabbits favorite feeding ground. Excellent results are being secured with poisoning the rabbits through bait prepared by the Biological Survey and distributed through the local county agent.

Soil blowing is again going to be a problem this spring. In fact it will take several wet years before the soil can have the cohesive powers that it once had.

Maximum temperature, 61°; minimum, 4°; precipitation, 0.15 inch.

TUCUMCARI:

February was so extreme, from a climatic standpoint, that discovering new records set by it has proved fascinating.

It was the third coldest February on record, its mean temperature of 32.5° being 8.5° below the long-time February mean. However, no reading colder than -3° was recorded. The absolute maximum, 63°, was the lowest maximum on record for February. Temperatures each night dropped to 31° or below, making this the first month on record when water froze every night.

Wind velocity was unusually high, with four or five days of soil movement. Precipitation totaled only 0.22 inch, occurring as light snows on four days.

Work consisted of field cultivation to minimize blowing, making of sorghum heading baskets, protecting trees from rabbits, and the start of vineyard pruning.

Guns and poison have exterminated at least 988 rabbits on this station the past 3½ months. The remaining pests are unusually wary and are stripping arborvitae and pines to a height of 2 feet. These trees are near the buildings, where hunting is difficult and poisoning unsafe. No feasible manner in which to protect an arborvita 12 years old and 8 or 10 feet in spread has been discovered.

Wheat on the plains south is well supplied with moisture. Cold weather has prevented growth, while close grazing and an ashy surface have enabled high winds on a few days of the past month to damage some fields severely. On perhaps 80 percent of the sown acreage prospects could be considered favorable if cattle could be removed, winds would subside, and temperatures rise.

BIG SPRING:

The weather during the past month has been unusually cold, although there have been no extremely low temperatures. However, below freezing temperatures were recorded every night except four during the month. These cold nights at this time are considered favorable conditions for fruit trees, in that it prevents them from budding out early and then getting killed by a later freeze.

Two rather severe sand storms have occurred during the month; in fact one of the worst in several years occurred February 27. Soil, that was generally considered in shape to resist any wind of the usual blow type, moved around considerably on that occasion.

Station work has consisted of sand furrowing, pruning grapes and shrubs, resetting fruit trees, plowing increase fields, and threshing bagged sorghum heads.

Maximum temperature, 76°; minimum, 19°; precipitation, 0.13 inch.

LAWTON:

Farm affairs and crop conditions continued through February without much change. Winter barley, fall seeded oats, and volunteer oats made less than normal growth in February, but both crops remain uninjured by freezing. There is sufficient growth to develop good crops under favorable growing conditions later in the spring. Spring seedings of oats made January 26 and February 4 are emerging to good stands. Wheat has made but little early spring development, and prospects continue to be the poorest in several years.

The mean temperature for February was 6.1° below normal. A minimum temperature of 12° on the 20th represents the low temperature for the winter to date. There were a good many days of high wind velocity and the monthly precipitation of 0.19 inch was more or less negligible.

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